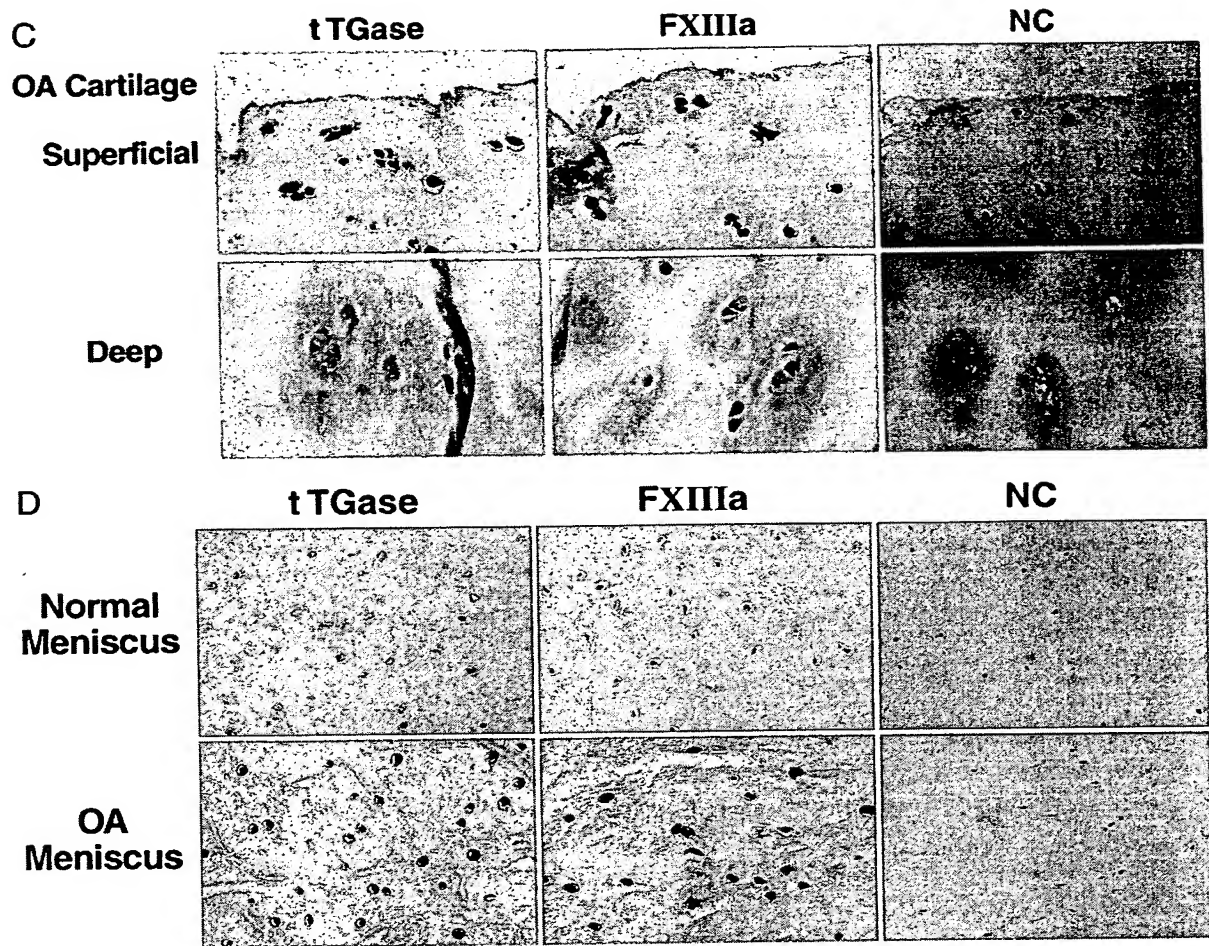
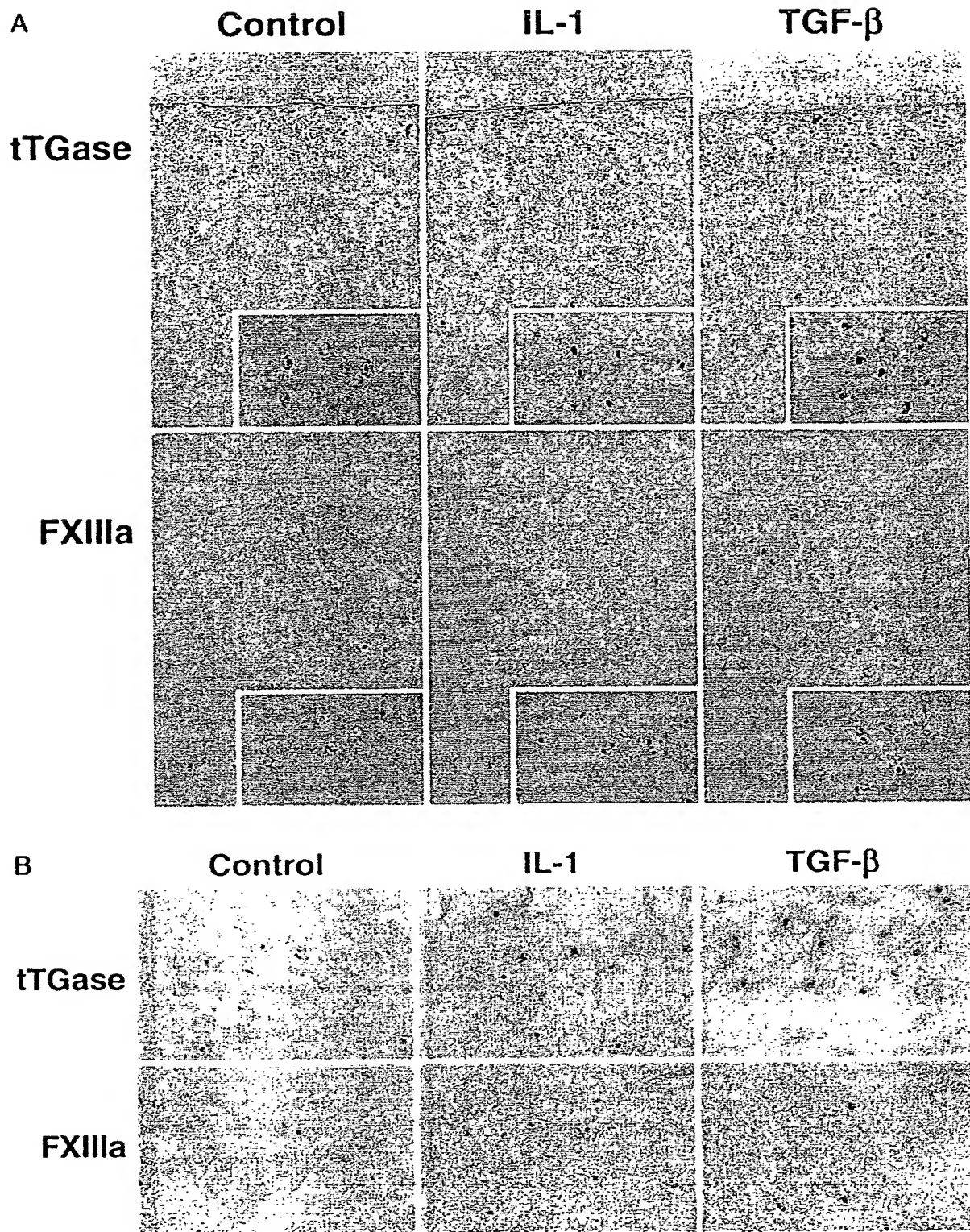


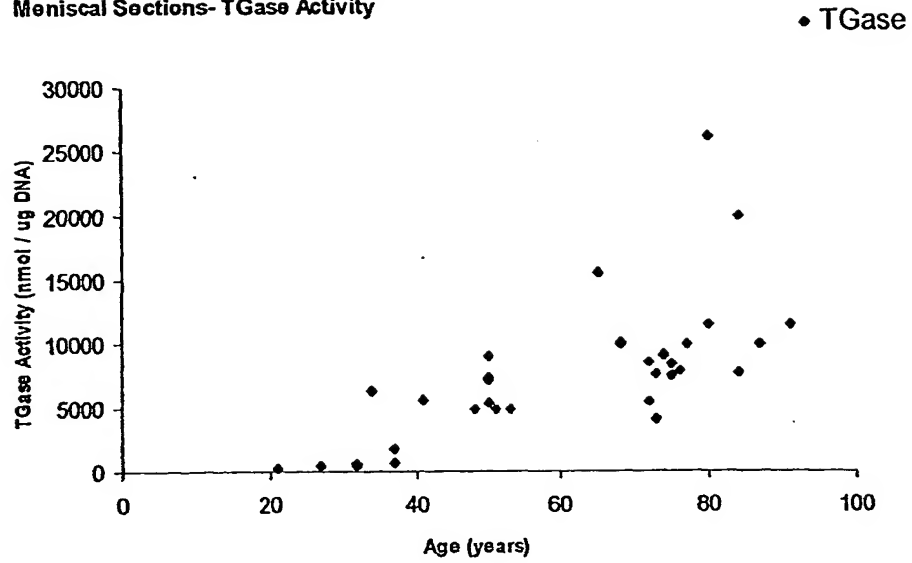
**Figures 1A-B**

**Figures 1C-D**

**Figures 2A-B**

A.

Meniscal Sections- TGase Activity



B.

Meniscal Sections - NTPPPH and AP activity

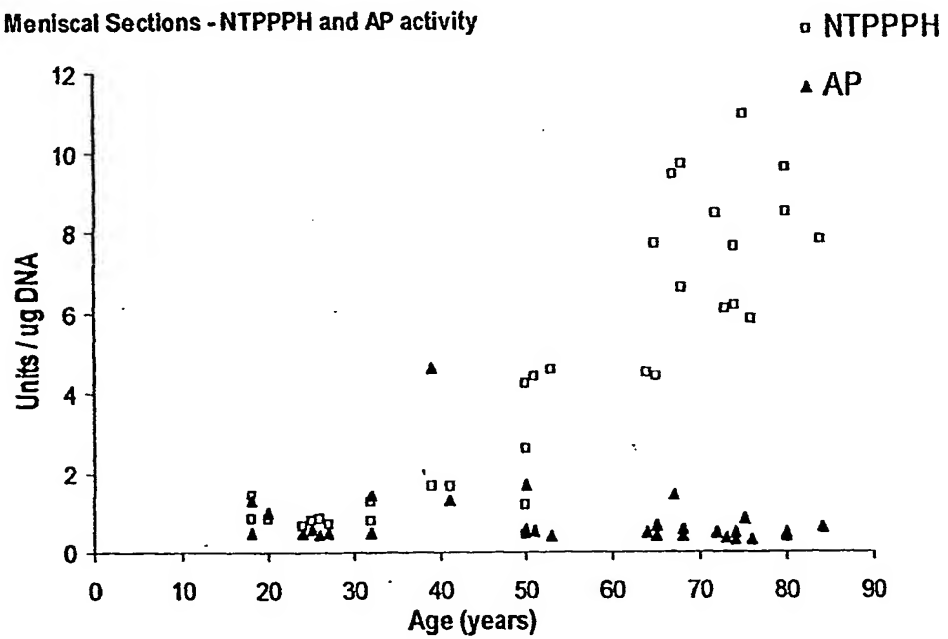


Figure 3

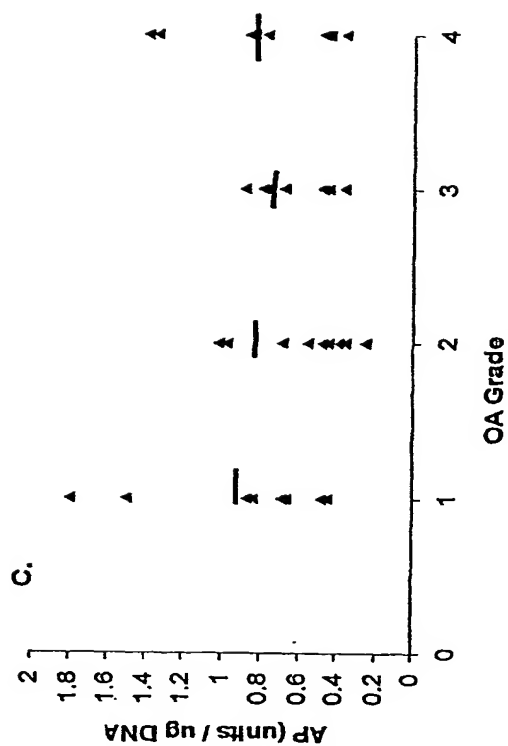
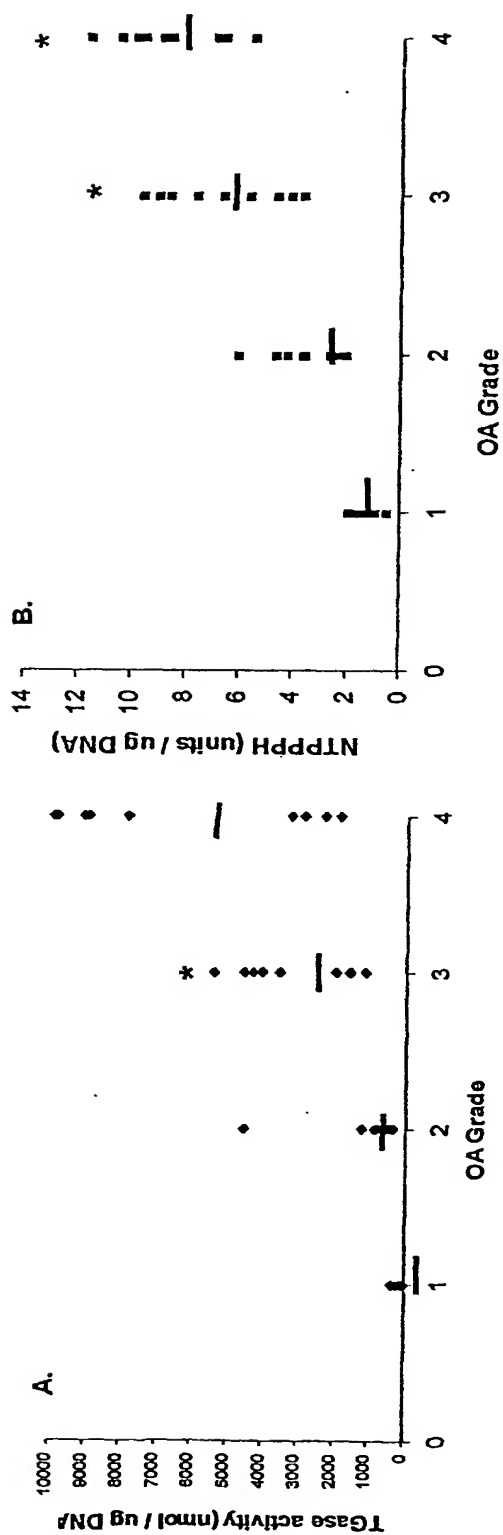


Figure 4

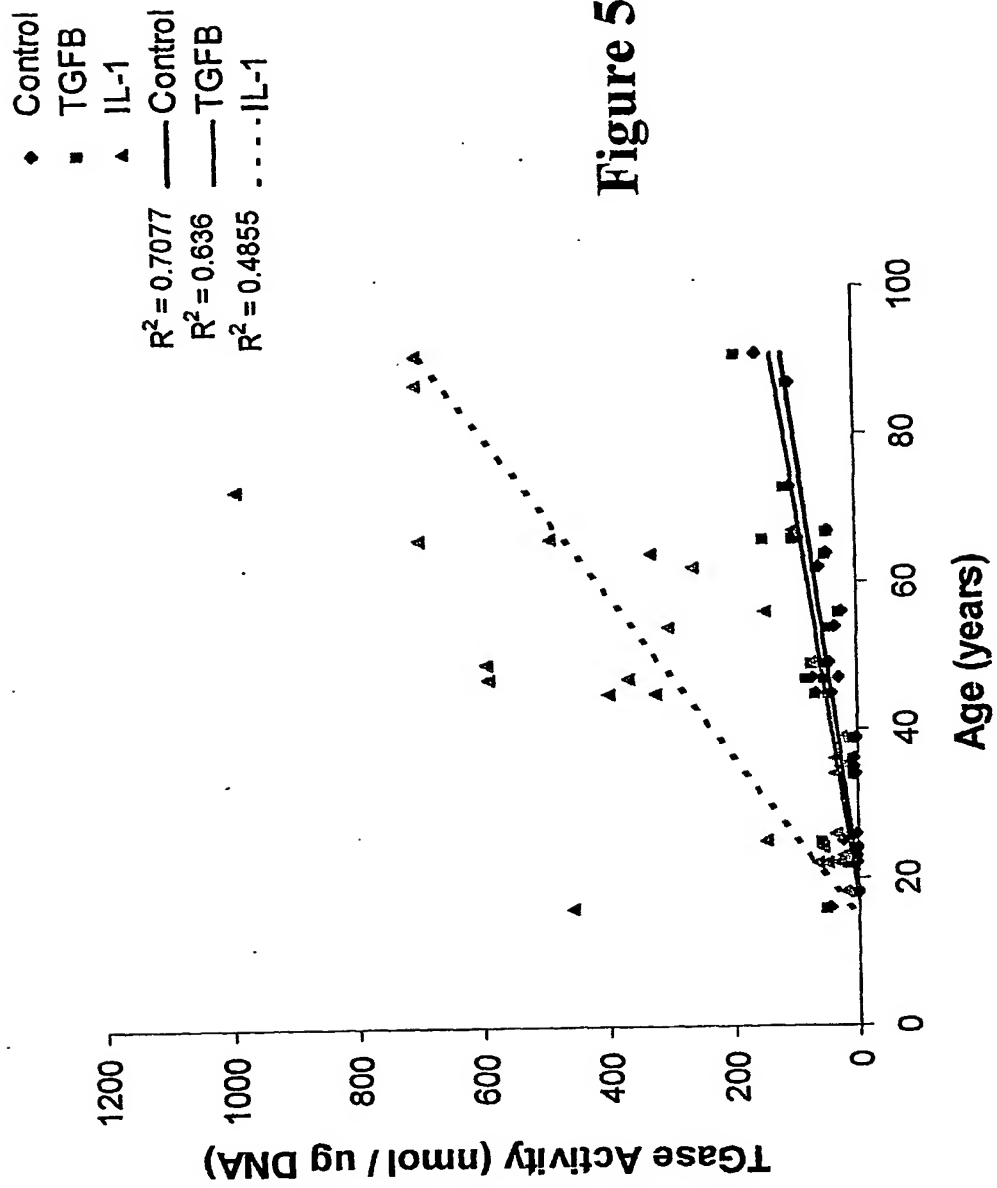


Figure 5A

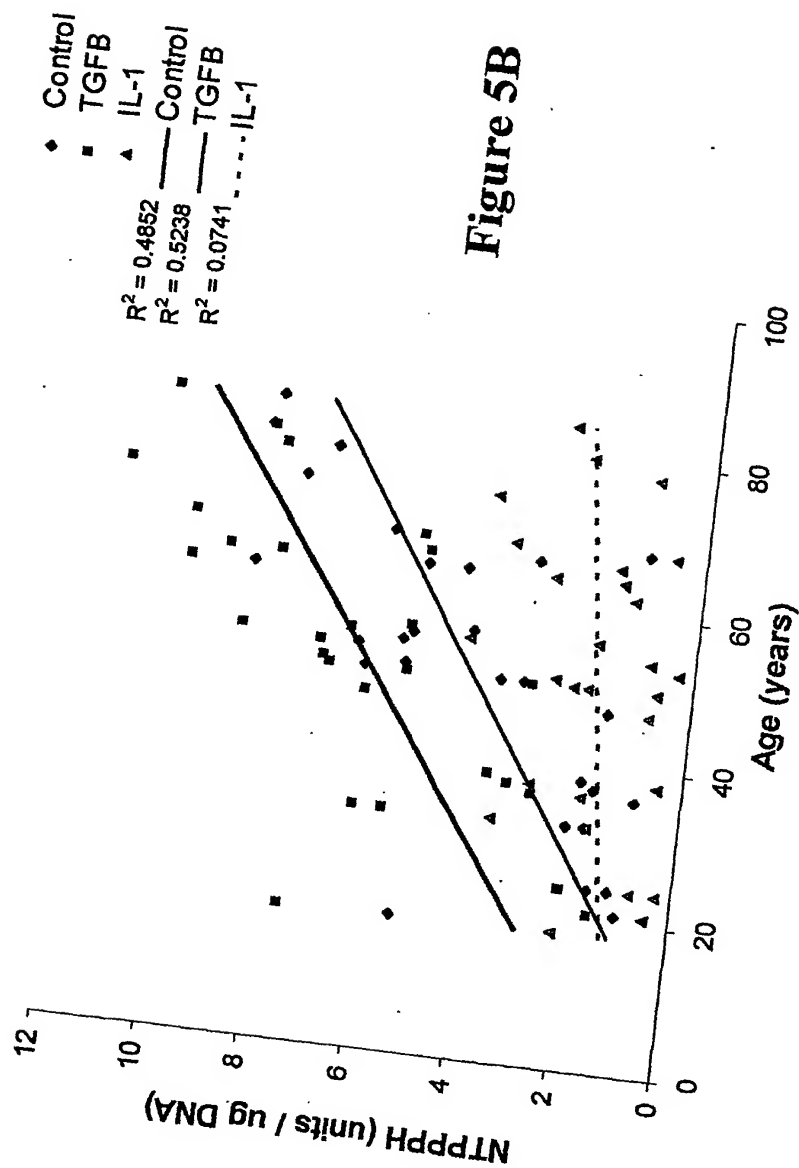


Figure 5B

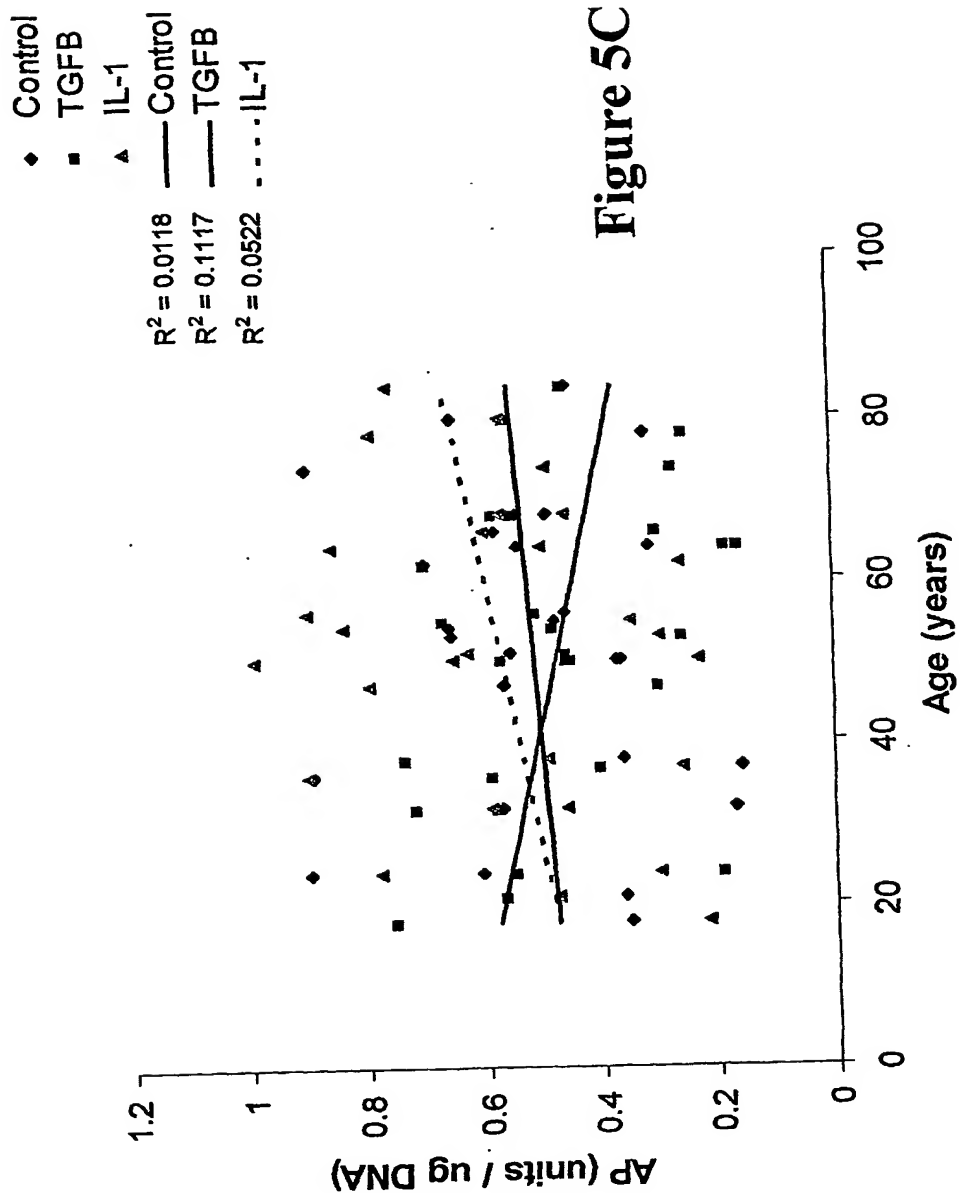
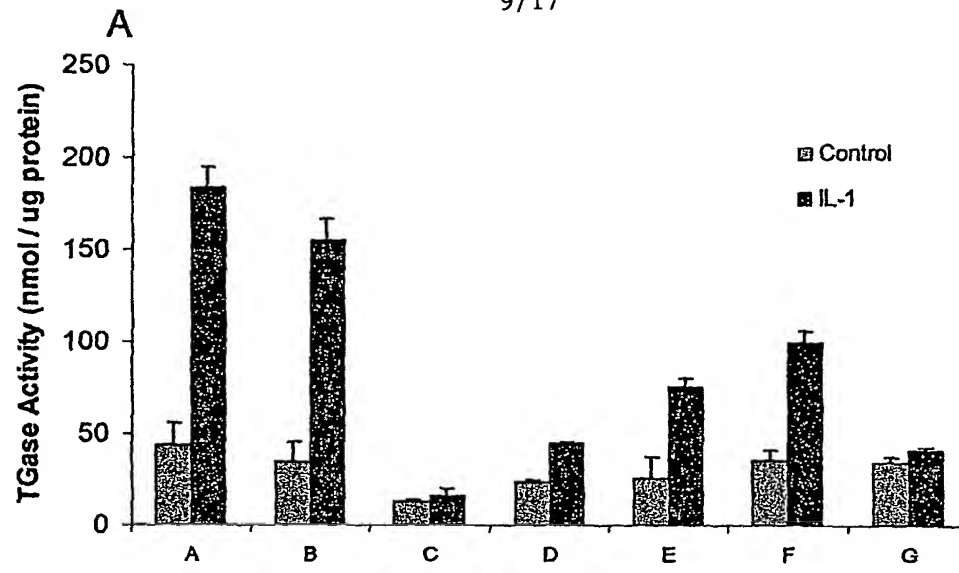


Figure 5C

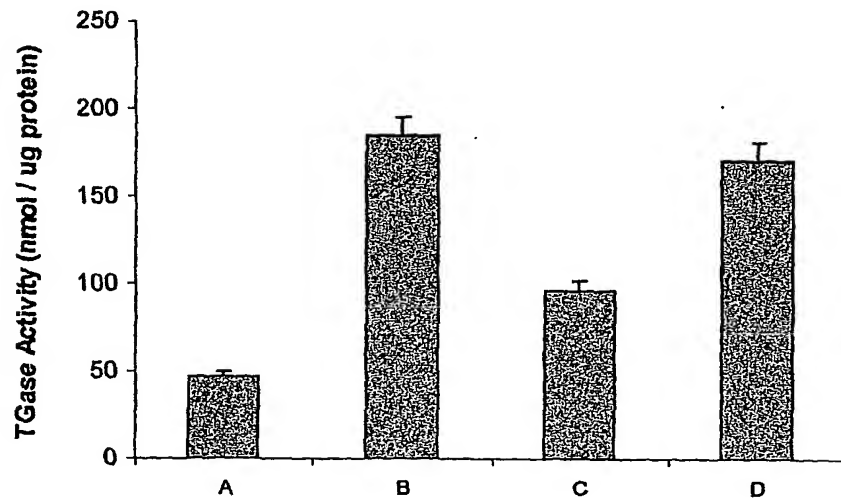


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**B.**

**Figure 6**



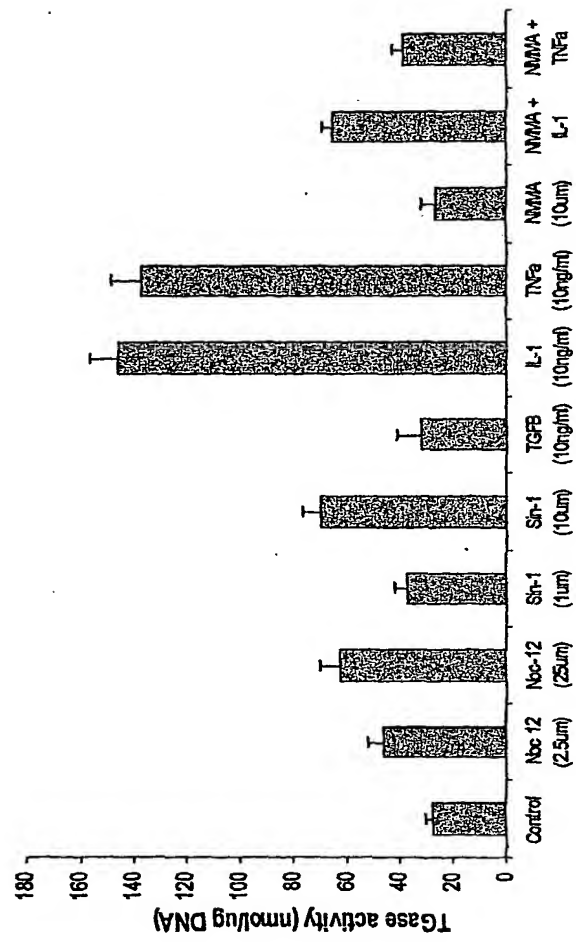
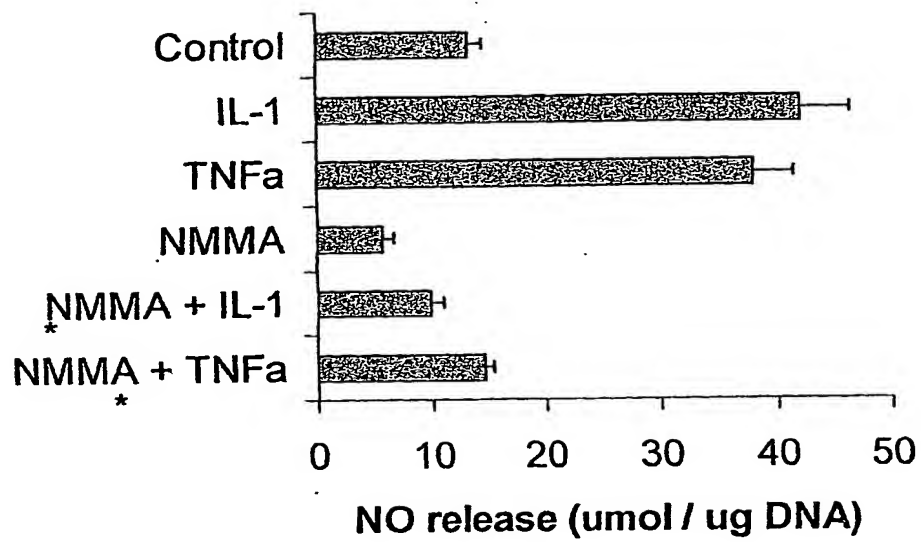
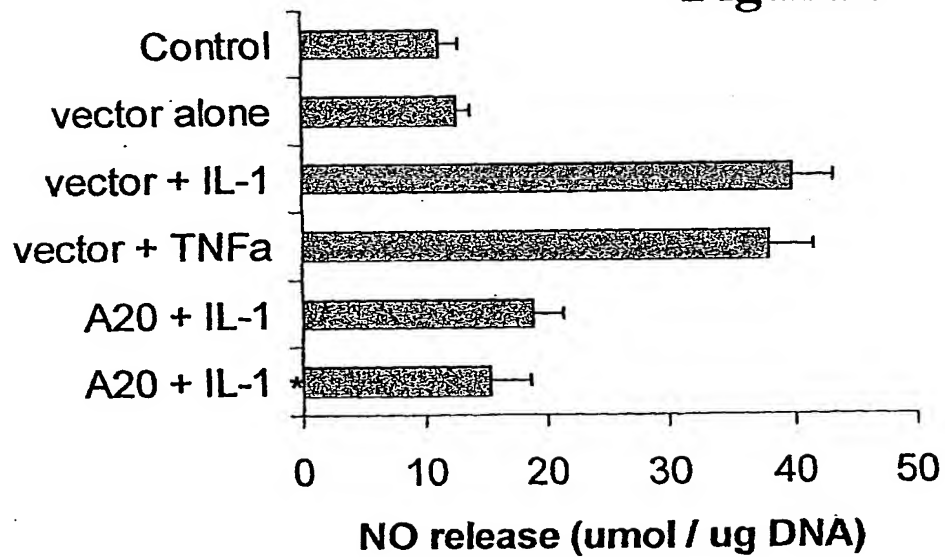


Figure 7

**A.****B.****Figure 8**

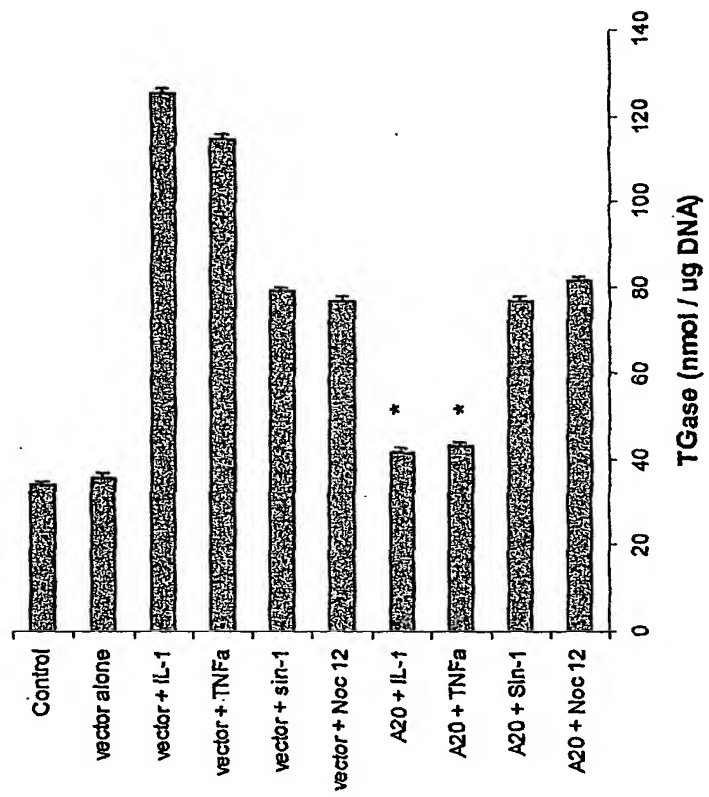
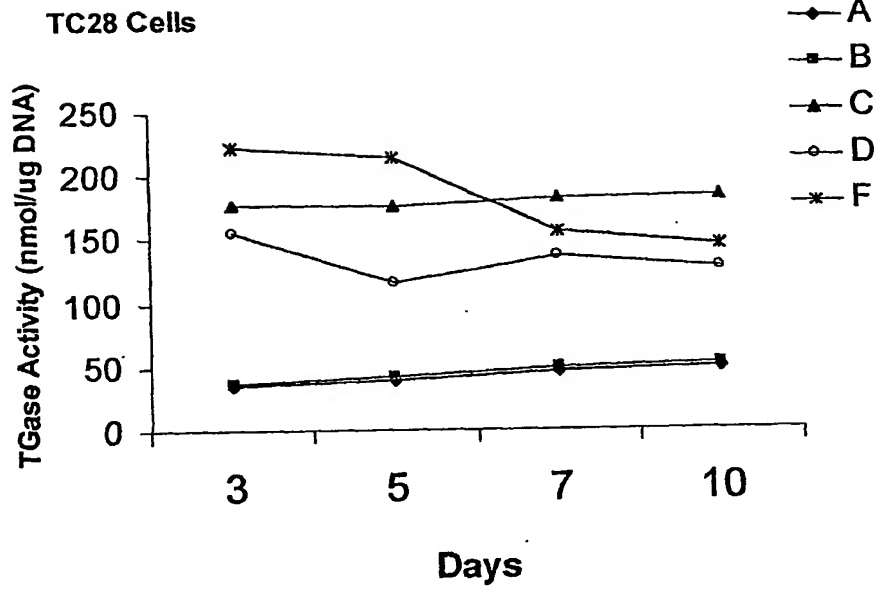
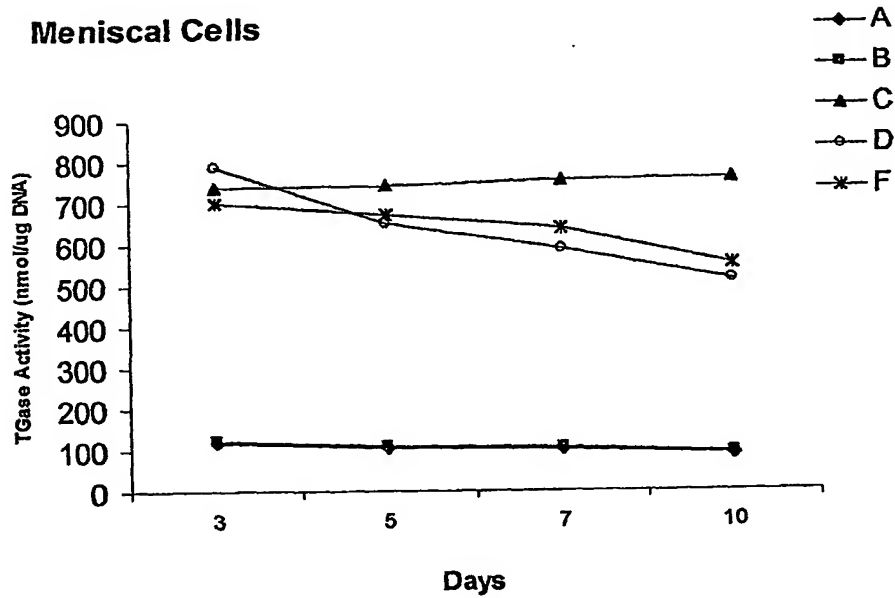


Figure 9

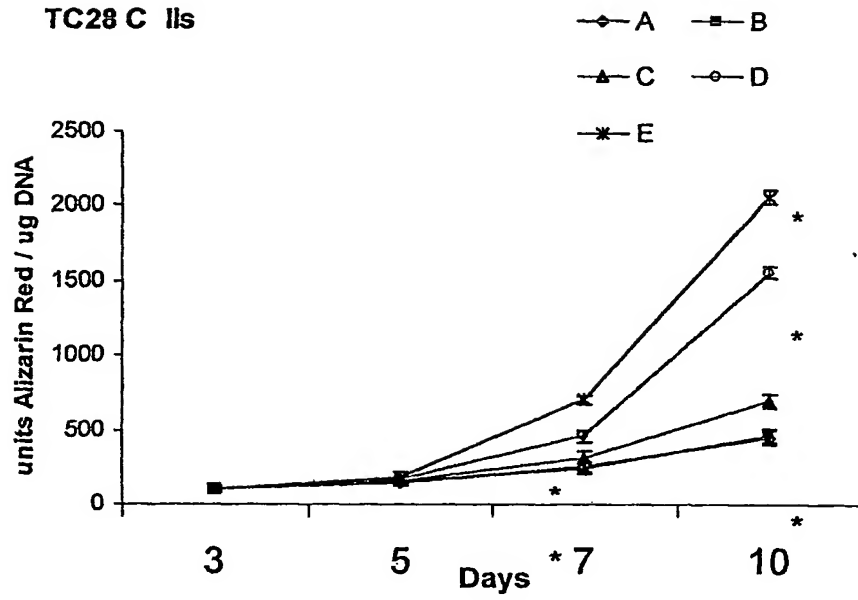
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**Figure 10**



## TC28 C IIs



## Meniscal Cells

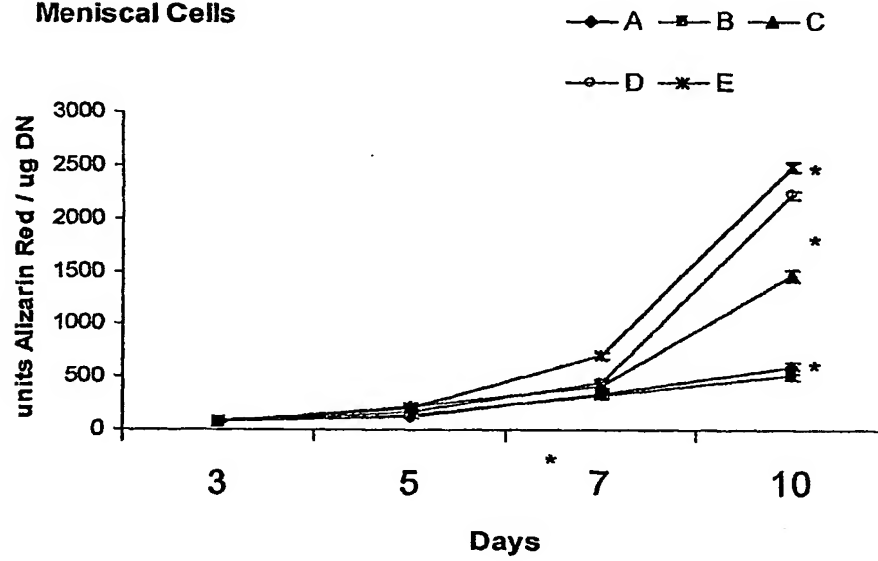
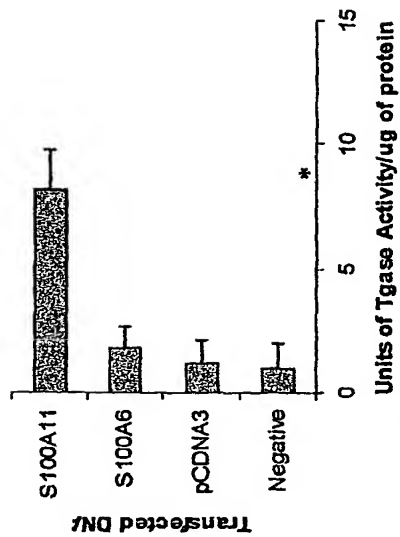
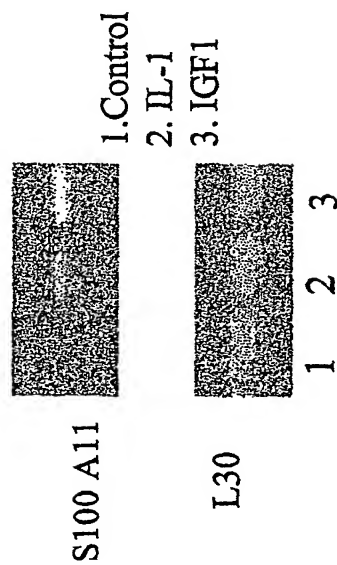


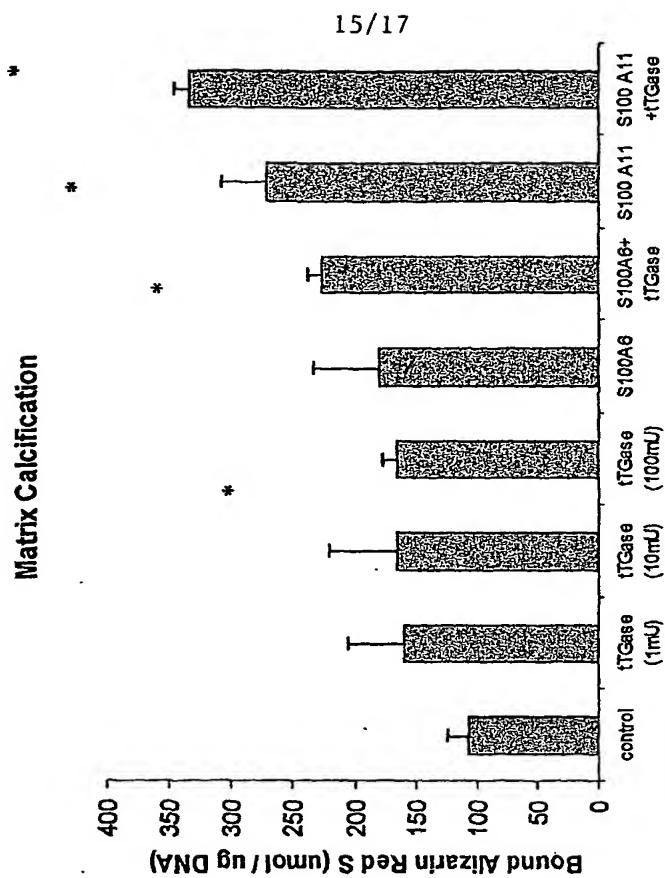
Figure 11



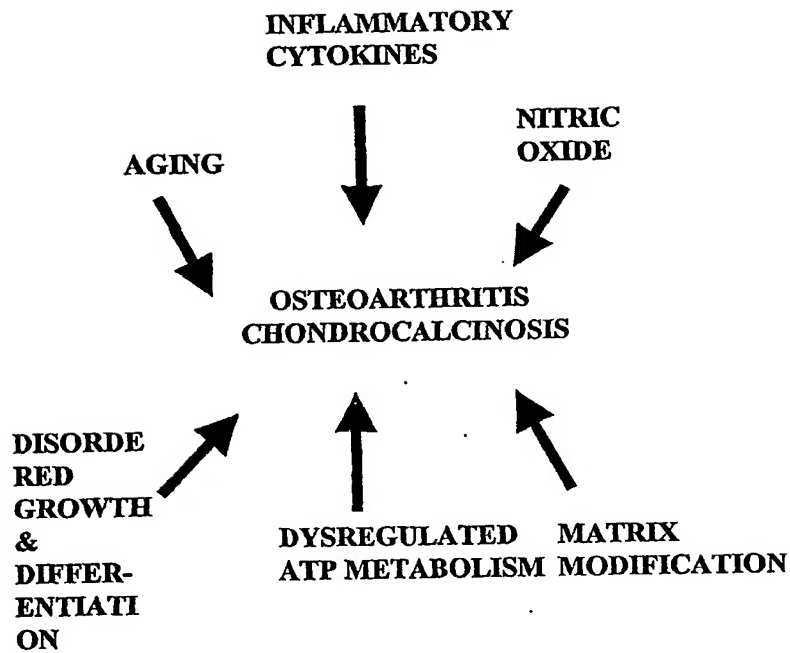
**Figure 12**



**Figure 14**



**Figure 13**



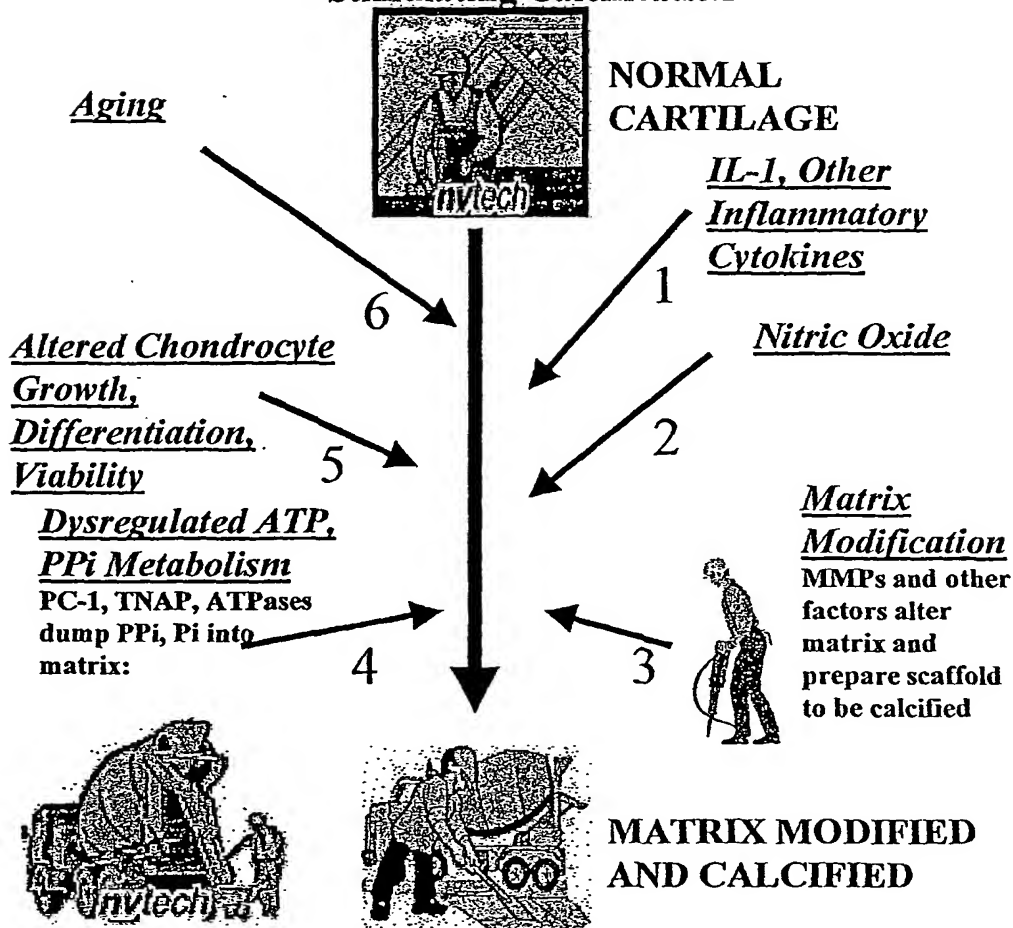
**Figure 15**



## HOW CHONDROCYTES CONSTRUCT MATRIX

### CALCIFICATION:

**Proposed Interface of TGases in Multiple Processes  
Stimulating Calcification**



- 1: Enhanced tTGase and Factor XIIIa expression and activity
- 2: Enhanced activity of TGases
- 3: TGases cross-link pericellular calcium-binding proteins
- 4: ATPase activity of tTGase
- 5: Chondrocyte hypertrophy associated with tTGase and Factor XIIIa expression and increased calcifying potential; TGases promote TGFbeta activation, TGases modulate adhesion, intracellular signaling, and apoptosis
- 6: Marked increase of TGase activity with aging in cartilage, particularly in response to IL-1

**Figure 16**